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10/820,295	04/08/2004	Brian Connell	22493-27U(16666ROUS01U)	7444
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EXAMINER				
MITCHELL, JASON D				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/820,295

**Applicant(s)**

CONNELL ET AL.

**Examiner**

Jason Mitchell

**Art Unit**

2193

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 April 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 April 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/CD/CD)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date \_\_\_\_\_

### DETAILED ACTION

1. This action is in response to an amendment filed on 4/17/08.
2. Claims 1-29 are pending in this application.

### *Response to Arguments*

3. **Applicant's arguments filed 4/17/08 have been fully considered but they are not persuasive.**
4. In the first full par. on pg. 14, the applicants state:

Independent Claim 13 recites a system that includes a global repository, with interfaces to other sources and an external interface. The global repository is configured to model network element commands, events, and data from a plurality of sources in a common representation. The global repository is also configured to translate data represented in a first modeling language to data represented in a second modeling language for storing the data [Page 2, lines 22 through Page 3, lines 8]. Thus, the global repository is a device for storing data, and for transforming data from one state to another. MPEP Section 2106 specifically states that if a claim provides for "a transformation or reduction of an article to a different state or thing ... USPTO personnel shall end the inquiry and find that the claim meets the statutory requirement of 35 U.S.C. 101." Thus, the system of Claim 13 is clearly directed to statutory subject matter, contrary to the Examiner's statement.

The examiner respectfully disagrees. Claim 13 is directed to a system of dis-embodied software (i.e. software per-se). While it may be argued that this system is *configured for* performing a transformation of data from one state to another, the claim does not in fact recite *performing* the transformation as does for example claim 1 (i.e. "A method comprising ... modeling ... translating ... storing and automatically generating code"). Accordingly, the examiner asserts the claim is properly construed as directed to software per-se and thus the rejection is maintained. This rejection can be overcome by

an amendment including some physical structure in the claimed system (e.g. a processor for executing the software components and/or a memory unit for storing the software components).

5. Starting in the 2<sup>nd</sup> full par. on pg. 15, the applicants state:

Courtney relates to a system for modeling the configuration of network devices using converters and schema storage devices in combination with a DOM generator. Page 6 of the Office Action cites paragraph [0040] of Courtney in an attempt to support the existence of this feature in the cited reference. Courtney states that "the XML-CLI converter 200 allows the system administrator 175 to interface with CLI-based network devices using a standard XML-based command format instead of a CLI-based command format." (Courtney, paragraph [0040]). Therefore, Courtney merely allows a network administrator to interface with network devices of one format (e.g. CLI-based network devices) using a different command format (e.g. an XML-based command format).

In contrast, the claimed invention requires not only "translating data represented in a first modeling language to data represented in a second modeling language, and "storing the data in the second modeling language ..." but also "automatically generating code to support an external management interface based on the stored data (i.e., in the second modeling language)", a feature completely lacking in Courtney. The automatically generated software supports the development of network element infrastructures, something Courtney does not disclose.

The examiner respectfully disagrees. The claims recite only "automatically generating code to support an external management interface" and are broad in that they do not indicate a specific method by which the code is generated, what form this code is to take or exactly how the code "supports" the external management interface. Courtney discloses automatically generating code (e.g. par. [0036] "using the retrieved schema, converts the individual commands of the configuration into a DOM"; in this case the 'generated code' is the code necessary to implement the objects which make up the DOM for a particular device). Courtney further discloses this generated code

supports an external management interface (e.g. par. [0038] "The hashed schema and/or the resulting DOM instance are used to drive the GUI used by the system administrator 175"; code that this "used to drive" an interface is reasonably interpreted as "supporting" that interface). Accordingly, it should be seen that Courtney anticipates the broadest reasonable interpretation of the claims.

The Applicants' assertions regarding the dependant claims present no additional arguments and are also un-persuasive for the reasons discussed above in relation to the independent claims.

### ***Claim Objections***

6. **Claim 3 is objected to because of the following informalities:**

**Claim 3 recites "code generated to support to support an external management interface"**. The examiner believes the claim should read "code generated to support an external management interface". Appropriate correction is required.

### ***Claim Rejections - 35 USC § 101***

7. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

8. **Claims 13-18 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.**

**Claim 13** fails to fall within a statutory category of invention. It is directed to a program itself (i.e. a software system comprising a global repository and a pair of interfaces), not a transformation of an article occurring as a result of executing the program, a machine programmed to operate in accordance with the program or a manufacture structurally and functionally interconnected with the program in a manner which enables the program to act as a computer component and realize its functionality. It's also clearly not directed to a composition of matter. Therefore it is rejected as being non-statutory under 35 USC 101.

**Claims 14-18** depend from claim 20 and do not address this issue and are thus also rejected as being non-statutory under 35 USC 101.

***Claim Rejections - 35 USC § 102***

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. **Claims 1-2, 5-7, 9, 11-14, 17-20, 23-26 and 28-29 are rejected under 35 U.S.C. 102(b) as being anticipated by US 2003/0046370 to Courtney (Courtney).**

11. **Regarding Claims 1, 13 and 19:** Courtney discloses:

modeling in a common representation network element commands, events and data from a plurality of sources (par. [0016] "use the same standard configuration format across multiple brands and models of network devices");

translating data represented in a first modeling language to data represented in a second modeling language (par. [0036] "convert the active command format for the network device 165 into an XML and/or DOM format");

storing the data in the second modeling language in a global data model repository (par. [0036] "The resulting DOM can then be stored in the DOM storage device 180"); and

automatically generating code to support an external management interface based on the stored data in the global repository (par. [0040] "the XML-CLI converter 200 allows the system administrator 175 to interface with CLI-based network devices").

In the case of claim 13 it is noted that Courtney further discloses:

a Global repository (Fig. 4, Schema Storage 170);

an interface to a plurality of sources (Fig. 4, Router 165 & Optical Component 165); and

an interface to an external interface (Fig. 4, 175; par. [0038] "the GUI used by the system administrator 175")

12. **Regarding Claims 2, 14 and 20:** The rejections of claims 1, 13 and 19 are incorporated respectively; further, Courtney discloses automatically generating system

documentation based on the stored data (par. [0038] "the system administrator 175 is presented with network device configurations in a standard, consistent format").

13. **Regarding Claims 5, 17 and 23:** The rejections of claims 1, 13 and 19 are incorporated respectively; further, Courtney discloses the second language is extensible markup language (XML) (par. [0036] "convert the active command format for the network device 165 into an XML ... format").

14. **Regarding Claims 6 and 25:** The rejections of claims 1 and 19 are incorporated respectively; further, Courtney discloses automatically generating code for the external interface includes automatically generating code to implement a command line interface (CLI) (par. [0040] "the XML-CLI converter 200 allows the system administrator 175 to interface with CLI-based network devices").

15. **Regarding Claim 7:** The rejection of claim 1 are incorporated respectively; further, Courtney discloses automatically generating code for the external interface includes automatically generating code to implement an Extensible Markup Language interface (par.[0039] "the standard XML-to-native XML converter").

16. **Regarding Claims 9 and 26:** The rejections of claims 1 and 19 are incorporated respectively; further, Courtney discloses automatically generating code for the external



interface includes automatically generating code to implement of a configuration database (par. [0045] "an XML storage device 250").

17. **Regarding Claims 11 and 28:** The rejections of claims 1 and 19 are incorporated respectively; further, Courtney discloses automatically generating code for the external interface includes automatically generating code to assist in implementation of an Application Program Interface (par. [0043] "The DOM applications can also include an (API)").

18. **Regarding Claims 12, 18, 24 and 29:** The rejections of claims 1, 13 and 19 are incorporated as appropriate; further, Courtney discloses modeling operational system data from a plurality of sources includes modeling run- time system data from a plurality of sources using at least one of the first language and the second language (par. [0036] "The DOM generator 160 then retrieves the configuration from the network device 165").

***Claim Rejections - 35 USC § 103***

19. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

20. **Claims 3, 15 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 2003/0046370 to Courtney (Courtney).**

21. **Regarding Claims 3, 15 and 21:** The rejections of claims 2, 14 and 20 are incorporated respectively; further, Courtney does not explicitly disclose the generated documentation corresponds to code generated to support an external management interface.

22. Courtney does teach 'conventional' systems (par. [0031] "Fig. 2 [is] one type of conventional router") that generate documentation corresponding to device interfaces (par. [0032] "the system administrator 125 can review available configuration commands and associated bounds by accessing and reviewing the commands stored in the command storage module 140").

23. It would have been obvious to one of ordinary skill in the art at the time the invention was made to generate system documentation (par. [0038] "the system administrator 175 is presented with network device configurations in a standard, consistent format") corresponding to code generated to support an external management interface (par. [0040] "the XML-CLI converter 200 allows the system administrator 175 to interface with CLI-based network devices"). Those of ordinary skill in the art would have been motivated to make this modification in order to provide a "help" screen (see par. [0032]) to administrators using the disclosed GUI to re-configure a displayed network (par. [0038]).

**24. Claims 4, 8, 10, 16, 22 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 2003/0046370 to Courtney (Courtney) in view of Applicant Acknowledged Prior Art Techniques.**

**25. Regarding Claims 4, 8, 10, 16, 22 and 27:** The rejections of claims 1, 13 and 19 are incorporated as appropriate; further Courtney does not disclose use of SMI, SNMP or SNMP subagents.

**26.** Applicant acknowledges the Simple Network Management Protocol (SNMP) and it's associated SMI language and subagents were known and used in the prior art to describe network devices (see e.g. pg. 10, line 13-23).

**27.** It would have been obvious to one of ordinary skill in the art at the time the invention was made to expand Courtney's system with a converter (par. [0016] "retrieving a network device's configuration, in a native format, from the network device ... and converting it into a standard-format configuration") to handle the configurations and commands of devices defined using SNMP and its associated SMI language and subagents (par. [0016] "retrieving a network device's configuration, in a native format"). Those of ordinary skill in the art would have been motivated to make such a change in order to provide a user friendly interface to devices whose interfaces conform to the SNMP specification (par. [0013] "a system and method are needed ... to create user-

friendly interfaces for ... devices"; par. [0016] "allow system administrators to use the same standard configuration format across multiple ... network devices").

### ***Conclusion***

28. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Mitchell whose telephone number is (571) 272-3728. The examiner can normally be reached on Monday-Thursday and alternate Fridays 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bullock Lewis can be reached on (571) 272-3759. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2193

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jason Mitchell/  
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7/10/08

/Lewis A. Bullock, Jr./  
Supervisory Patent Examiner, Art Unit 2193